First ISCCP Regional Experiment (FIRE) Cirrus 2 National Oceanic and Atmospheric Administration (NOAA) Wind Profiler Langley DAAC Data Set Document

Summary:

The First ISCCP Regional Experiments have been designed to improve data products and cloud/radiation parameterizations used in general circulation models (GCMS). Specifically, the goals of FIRE are (1) to improve the basic understanding of the interaction of physical processes in determining life cycles of cirrus and marine stratocumulus systems and the radiative properties of these clouds during their life cycles and (2) to investigate the interrelationships between the ISCCP data, GCM parameterizations, and higher space and time resolution cloud data.

To-date, four intensive field-observation periods were planned and executed: a cirrus IFO (October 13 - November 2, 1986); a marine stratocumulus IFO off the southwestern coast of California (June 29-July 20, 1987) a second cirrus IFO in southeastern Kansas (November 13 - December 7, 1991); and a second marine stratocumulus IFO in the eastern North Atlantic Ocean (June 1 - June 28, 1992). Each mission combined coordinated satellite, airborne, and surface observations with modeling studies to investigate the cloud properties and physical processes of the cloud system.

This document provides information for the FIRE_CI2_NOAA_WNDPFS data set.

Table of Contents:

1. Data Set Overview:

Data Set Identification:

FIRE_CI2_NOAA_WNDPFS:

First ISCCP Regional Experiment (FIRE) Cirrus 2 National Oceanic and Atmospheric Administration (NOAA) Wind Profiler Data (FIRE_CI2_NOAA_WNDPFS)

Data Set Introduction:

The NOAA wind profiles were collected during the period from Nov. 13, 1991 to Dec. 7 1991. The original data were stored in the Enhanced Binary Universal Form (EBUF) format. These data files have been reformatted and are provided (in ASCII format) by the Langley DAAC.

Objective/Purpose:

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Summary of Parameters:

Ground Height
Wind Speed

Discussion:

...

Related Data Sets:

...

2. Investigator(s):

Investigator(s) Name and Title:

...

Title of Investigation:

First ISCCP Regional Experiment (FIRE)

Contact Information:

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FAX: ...
Email: MACE@ESSC.PSU.EDU

3. Theory of Measurements:

...

4. Equipment:

Sensor/Instrument Description:

Collection Environment:

...

Source/Platform:

GROUND STATION

Source/Platform Mission Objectives:

...

Key Variables:

Ground Height
Wind Speed

Principles of Operation:

...

Sensor/Instrument Measurement Geometry:

...

Manufacturer of Sensor/Instrument:

...

Sensor/Instrument:

WIND PROFILER

Calibration:

Specifications:

...

Tolerance:

...

Frequency of Calibration:

...

Other Calibration Information:

...

5. Data Acquisition Methods:

...

6. Observations:

Data Notes:

...

Field Notes:

...

7. Data Description:

Spatial Characteristics:

Spatial Coverage:

...

Spatial Coverage Map:

Data Set Name	Min Lat	Max Lat	Min Lon	Max Lon
FIRE_CI2_NOAA_WNDPFS	31.78	44.67	-106.35	-71.49

Spatial Resolution:

...

Projection:

...

Grid Description:

...

Temporal Characteristics:

Temporal Coverage:

Data Set Name	Begin Date	End Date
FIRE_CI2_NOAA_WND PFS	11-13-1991	12-07-1991

Temporal Coverage Map:

...

Temporal Resolution:

...

Data Characteristics:

Parameter/Variable:

There are 10 variables in a NOAA wind profile record. Variables are separated by white space(s). The variable values are left-justified. These variables with their units are listed in order below.

Variable Name	Unit
Height above station	Meters
Signal Power (0th moment) North	Decibels
Signal Power (0th moment) East	Decibels
Signal Power (0th moment) Vertical	Decibels
Mean Velocity (1st moment) North	Meters/Second
Mean Velocity (1st moment) East	Meters/Second
Mean Velocity (1st moment) Vertical	Meters/Second
Velocity variance (2nd moment) North	(Meters/Second)**2
Velocity variance (2nd moment) East	(Meters/Second)**2
Velocity variance (2nd moment) Vertical	(Meters/Second)**2

Variable Description/Definition:

See above.

Unit of Measurement:

See above.

Data Source:

...

Data Range:

...

Sample Data Record:

...

8. Data Organization:

Data Granularity:

A general description of data granularity as it applies to the IMS appears in the EOSDIS Glossary.

The NOAA wind profiles data set consists of 25 ASCII files. A NOAA wind profiles file has multiple windprofiles records. Each file is named ci2_noawnd_yymmdd_6m, where yy is the year, mm the month, and dd the day when the data were collected. A wind profiles record starts with three header lines, followed by three lines of column headings, followed by windprofile data, and ends with the parameter "Profiler in checkout mode flag" line. The first header line contains date and time values, the second header line contains station latitude and longitude values, and the third header line contains the values for the parameters "height of station above sea level" and "height increment".

Data Format:

The data are in ASCII format.

9. Data Manipulations:

Formulae:

Derivation Techniques and Algorithms:

...

Data Processing Sequence:

Processing Steps:

...

Processing Changes:

...

Calculations:

Special Corrections/Adjustments:

...

Calculated Variables:

...

Graphs and Plots:

Image files are not available for this data set.

10. Errors:

Sources of Error:

...

Quality Assessment:

Data Validation by Source:

...

Confidence Level/Accuracy Judgement:

...

Measurement Error for Parameters:

...

Additional Quality Assessments:

...

Data Verification by Data Center:

...

11. Notes:

Limitations of the Data:

...

Known Problems with the Data:

...

Usage Guidance:

...

Any Other Relevant Information about the Study:

...

12. Application of the Data Set:

...

13. Future Modifications and Plans:

There are no plans to modify these data sets.

14. Software:

Software Description:

Sample read software is available for this data set.

Software Access:

The software can be obtained through the Langley DAAC. Please refer to the contact information below. The software can also be obtained at the same time the user is ordering this data set.

15. Data Access:

Contact Information:

Langley DAAC User and Data Services Office
NASA Langley Research Center
Mail Stop 157D
Hampton, Virginia 23681-2199

USA
Telephone: (757) 864-8656
FAX: (757) 864-8807
E-mail: support-asdc@earthdata.nasa.gov
URL: http://eosweb.larc.nasa.gov

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Procedures for Obtaining Data:

The Langley DAAC Information Management System (IMS) is an on-line system that features a graphical user interface (GUI) that allows to query the Langley DAAC dataset holdings, to view pre-generated browse products, and to order specific data products. Users may also request data by letter, telephone, electronic mail (INTERNET), or personal visit.

The Langley DAAC User and Data Services (UDS) staff provides technical and operational support for users ordering data. The Langley DAAC Handbook is available in a postscript file through the IMS for users who want detailed information about the Langley DAAC holdings. Users may also obtain a copy by contacting:

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NASA Langley Research Center
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USA
Telephone: (757) 864-8656
FAX: (757) 864-8807
E-mail: support-asdc@earthdata.nasa.gov
URL: http://eosweb.larc.nasa.gov

Data Center Status/Plans:

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16. Output Products and Availability:

There are no output products available at this time.

17. References:

...

18. Glossary of Terms:

EOSDIS Glossary.

19. List of Acronyms:

NASA - National Aeronautics Space Administration
URL - Uniform Resource Locator

EOSDIS Acronyms.

20. Document Information:

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Document Curator:

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